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10/807,070	03/23/2004	Jogesh Warrior	10040054-1	2645

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EXAMINER	
BARAN, MARY C	

ART UNIT	PAPER NUMBER
2857	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/807,070	WARRIOR ET AL.	
	Examiner	Art Unit	
	Mary C. Baran	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 October 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. This action is responsive to the arguments filed 24 October 2007. Claims 1-28 are pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 6-17, 19-25, 27 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Sorokine et al. (U.S. Patent No. 6,430,414) (hereinafter Sorokine).

Referring to claim 1, Sorokine teaches operating a sensor net (see Sorokine, column 7 lines 9-13), comprising:

detecting access attempts by one or several mobile devices to multiple nodes within said sensor net (see Sorokine, column 7 lines 9-15);

calculating a respective probability of future access by a mobile device (see Sorokine, column 10 lines 58-62) for each of said multiple nodes in response to said detecting (see Sorokine, column 7 lines 15-18);

communicating information related to said calculating probabilities through said sensor net (see Sorokine, column 7 lines 18-20); and

routing measurement data for collection to respective ones of said multiple nodes utilizing said calculating probabilities (see Sorokine, column 1 lines 32-35).

Referring to claims 2, Sorokine teaches receiving probabilities of future access from a mobile device by least one node of said sensor net and communicating said received probabilities through said sensor net, wherein said routing further utilizes said received probabilities to route measurement data (see Sorokine, column 7 lines 9-22).

Referring to claim 3, Sorokine teaches that said detecting, calculating and communicating occur repetitively causing routing of measurement data to vary dynamically in response to changes in access patterns associated with mobile device (see Sorokine, column 7 lines 27-32).

Referring to claim 6, Sorokine teaches receiving a first portion of said information at a first node in said sensor net (see Sorokine, column 7 lines 9-15); selecting a second portion from said first portion of information utilizing calculated probabilities of future access (see Sorokine, column 7 lines 15-18); and transmitting said second portion from said first node to a second node in said sensor net (see Sorokine, column 7 lines 18-20).

Referring to claim 7, Sorokine teaches that said selecting removes information from said first portion utilizing a cost function (see Sorokine, column 8 lines 31-44).

Referring to claim 8, Sorokine teaches that said cost function calculates a path cost to a collection point (see Sorokine, column 8 lines 31-44).

Referring to claim 9, Sorokine teaches that said cost function is a function of communication hops to a collection point (see Sorokine, column 8 lines 31-44).

Referring to claim 10, Sorokine teaches selecting a destination collection point utilizing said communicated information (see Sorokine, column 7 lines 45-54).

Referring to claim 11, Sorokine teaches selecting multiple destination collection points utilizing said communicated information (see Sorokine, column 7 lines 45-54).

Referring to claim 12, Sorokine teaches calculating a group probability of access to at least one of said multiple destination collection points (see Sorokine, column 8 line 60 – column 9 line 4); and comparing said calculated group probability of access to a threshold value (see Sorokine, column 9 lines 31-49).

Referring to claim 13, Sorokine teaches utilizing a pseudo-random algorithm to distribute measurement data beyond optimal paths identified utilizing said communicated information (see Sorokine, column 2 lines 35-41).

Referring to claim 14, Sorokine teaches communicating information that is indicative of a change in previously communicated information related to said probabilities of future access (see Sorokine, column 7 lines 23-31).

Referring to claim 15, Sorokine teaches that said mobile devices are cellular devices (see Sorokine, column 1 lines 7-12).

Referring to claim 16, Sorokine teaches a sensor device for operating a sensor net (see Sorokine, column 7 lines 9-13), comprising:

means for detecting and recording attempts to access measurement data by mobile devices (see Sorokine, column 7 lines 9-15);

means for calculating a probability of future access by a mobile device to said sensor device utilizing said recording access attempts (see Sorokine, column 10 lines 58-62 and column 7 lines 15-18);

means for receiving information related to probabilities of future access associated with other sensor devices within said sensor net (see Sorokine, column 10 lines 58-62 and column 7 lines 15-18);

means for communicating information related to probabilities of future access to other sensor devices (see Sorokine, column 7 lines 18-20); and

means for routing measurement data within said sensor net in response to said means for calculating and said means for receiving (see Sorokine, column 1 lines 32-35).

Referring to claim 17, Sorokine teaches means for receiving probabilities of future access from a mobile device by least one node of said sensor net and communicating said received probabilities through said sensor net, wherein said routing further utilizes said received probabilities to route measurement data (see Sorokine, column 7 lines 9-22).

Referring to claim 19, Sorokine teaches communicating information related to probabilities of future access to other sensor devices limits communication to information associated with a subset of sensor devices within said sensor net (see Sorokine, column 7 lines 15-32).

Referring to claim 20, Sorokine teaches communicating selects said subset of sensor devices in relation to respective probabilities of access to said subset of sensor devise and a cost function (see Sorokine, column 8 lines 31-44).

Referring to claim 21, Sorokine teaches routing employs source address routing to communicate measurement data originating at said sensor device (see Sorokine, column 7 lines 15-22).

Referring to claim 22, Sorokine teaches selecting a plurality of collection points utilizing said source address routing (see Sorokine, column 7 lines 45-54).

Referring to claim 23, Sorokine teaches that said plurality of collection points are selected by determining a probability of access to at least one of said plurality of collections points (see Sorokine, column 8 line 60 – column 9 line 4).

Referring to claim 24, Sorokine teaches randomization logic for directing measurement data beyond optimal paths defined by probabilities of future access to other sensor devices (see Sorokine, column 2 lines 35-41).

Referring to claim 25, Sorokine teaches a method of operating a sensor net (see Sorokine, column 7 lines 9-13), comprising:

detecting access attempts by one or several mobile devices to multiple nodes within said sensor net (see Sorokine, column 7 lines 9-15);

determining probabilities of future access by said mobile devices to nodes of said sensor net (see Sorokine, column 10 lines 58-62 and column 7 lines 15-18);

distributing information related to said determined probabilities through said sensor net (see Sorokine, column 7 lines 18-20); and

routing measurement data utilizing said distributed information related to said determined probabilities (see Sorokine, column 1 lines 32-35).

Referring to claim 27, Sorokine teaches receiving information from a mobile deice related to future access activity of mobile devices (see Sorokine, column 7 lines 9-22).

Referring to claim 28, Sorokine teaches receiving at a first node identification of a plurality of collection points (see Sorokine, column 7 lines 9-15); selecting a subset of said plurality of collection points using a cost function related to communicating to the plurality of collection points (see Sorokine, column 7 lines 15-18); and communicating information related to said determined probabilities limited to said subset to a second node (see Sorokine, column 7 lines 18-20).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4, 5, 18 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sorokine et al. (U.S. Patent No. 6,430,414) (hereinafter Sorokine) in view of Raith (U.S. Patent No. 6,711,408).

Referring to claim 4, Sorokine teaches all the features of the claimed invention except that said routing measurement data varies in response to the time of day when said routing is performed.

Raith teaches that said routing measurement data varies in response to the time of day when said routing is performed (see Raith, column 8 lines 62-64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sorokine to include the teachings of Raith because routing measurement data in response to time would have allowed the skilled artisan to avoid barring new call attempts (see Raith, column 8 lines 55-61).

Referring to claim 5, Sorokine teaches all the features of the claimed invention except that said calculating calculates a time window average of detected access attempts.

Raith teaches that said calculating calculates a time window average of detected access attempts (see Raith, column 8 lines 54-64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sorokine to include the teachings of Raith because routing measurement data in response to time would have allowed the skilled artisan to avoid barring new call attempts (see Raith, column 8 lines 55-61).

Referring to claim 18, Sorokine teaches all the features of the claimed invention except that probabilities of access are correlated to a time of day.

Raith teaches that probabilities of access are correlated to a time of day (see Raith, column 8 lines 62-64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sorokine to include the teachings of Raith because routing measurement data in response to time would have allowed the skilled artisan to avoid barring new call attempts (see Raith, column 8 lines 55-61).

Referring to claim 26, Sorokine teaches all the features of the claimed invention except calculating time window averages of access attempts by mobile devices to respective nodes of said sensor net.

Raith teaches calculating time window averages of access attempts by mobile devices to respective nodes of said sensor net (see Raith, column 8 lines 54-64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sorokine to include the teachings of Raith because routing measurement data in response to time would have allowed the skilled artisan to avoid barring new call attempts (see Raith, column 8 lines 55-61).

Response to Arguments

4. Applicant's arguments filed 24 October 2007 have been fully considered but they are not persuasive.

Applicant argues that Sorokine does not teach "calculating a respective probability of future access by a mobile device"; however, Applicant's arguments are not

well taken. Sorokine teaches prioritizing an effective neighbor list based on the results of a channel prediction process so each mobile station (i.e. mobile device searching for a future access point) can focus its search power on signals from a base station or cell with the strongest likelihood of being the handoff candidate (i.e. prediction of future access). Therefore, Sorokine teaches calculating a respective probability of future access by a mobile device (see Sorokine, column 10 lines 58-62).

Applicant further argues that Sorokine does not teach "routing measurement data for collection to respective ones of said multiple nodes utilizing said calculating probabilities"; however, Applicants arguments are not well taken. As stated above, Sorokine teaches determining a channel prediction for determining the strongest handoff likelihood. The handoff allowing the mobile station to smoothly transition from the coverage of one cell to another without interruption. Therefore, Sorokine teaches routing measurement data for collection to respective ones of said multiple nodes utilizing said calculating probabilities (see Sorokine, column 1 lines 32-35).

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary C. Baran whose telephone number is (571) 272-2211. The examiner can normally be reached on Monday to Friday 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on (571) 272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mary Catherine Baran

18 January 2008

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